L. E. Carpenter 9/18/79

3.2.J XYLENES

TESTING RECOMMENDATIONS:

Mutagenicity
Teratogenicity
Epidemiology

CATEGORY IDENTIFICATION: This category consists of the three isomers of dimethyl benzene: ortho-xylene (CAS No. 95-47-6), meta-xylene (CAS No. 108-38-3), and para-xylene (CAS No. 106-42-3)

REASONS FOR RECOMMENDATIONS:

Production, Release, and Exposure: In the aggregate, approximately 8 billion pounds of xylenes are produced each year. Approximately 900 million pounds are released to the environment each year. Mixed xylenes were ranked by NIOSH 13th out of approximately 7000 agents in terms of the number of workers exposed. Xylenes are also used in a wide variety of consumer products, resulting in general population exposures.

Effects of Concern:

Mutagenicity: Mutagenesis tests have not been reported for any of the xylenes, but should be conducted in view of widespread exposure and evidence of toxic effects to several organ systems.

Teratogenicity: Xylenes cross the placental barrier and, according to two Russian studies, are embryotoxic. Therefore, they should be tested for teratogenicity.

Epidemiology: Because of their long-term use, high human exposure, and demonstrated effects in animals, epidemiological studies may be particularly important in assessing the human health effects of xylenes and should be conducted.